

A NEW SPECIES OF *ADISTEMIA* (COLEOPTERA: LATRIDIIDAE) FROM COSTA RICA

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Abstract.—*Adistemia okeefei* Andrews, NEW SPECIES, is described from Costa Rica. Its relationship to the genera *Adistemia* and *Dicastris* is discussed.

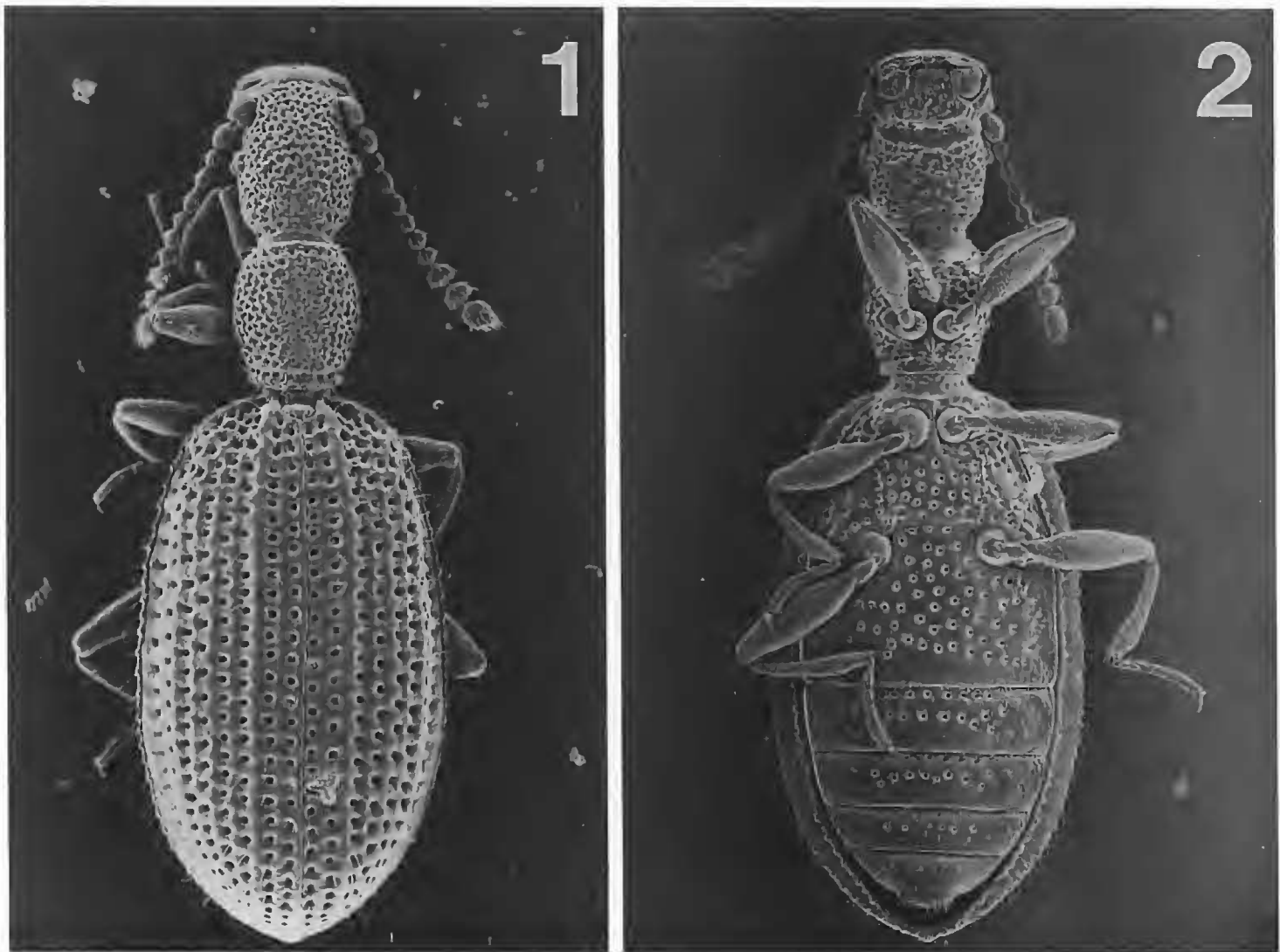
Key Words.—Insecta, Coleoptera, Latridiidae, *Adistemia*, *Dicastris*, Costa Rica.

The genus *Adistemia* is represented by 11 species from Chile and Peru, including the cosmopolitan species *Adistemia watsoni* Wollaston. *Adistemia watsoni* is commonly associated with stored products in commerce (Hinton 1941) and likely had a widespread distribution at the time of its description. Wollaston (1871) recognized this and, while describing it from Madeira, commented that it was likely not indigenous there because of a specimen in the British Museum from Chile. Dajoz (1974), in a revision of *Adistemia* of South America, treated 11 species including *A. watsoni*. All of the species are known from Chile, although it is not clear that *A. watsoni* has been collected in nature. *Adistemia rileyi* was described from Lake Titicaca on the northern border of Chile and is known from within Chile. Berlese samples from Guanacaste Province, Costa Rica taken in July of 1996, have uncovered a new species. This new species occurs more than 1000 km from the northern most reported locality for a South American *Adistemia* species.

Adistemia okeefei Andrews, NEW SPECIES

Figs. 1–5

Description.—Length 1.13 to 1.40 mm ($n = 12$). Width 0.43 to 0.50 mm ($n = 12$). Elongate; head and pronotum cylindrical, elytra dorso-ventrally flattened, oval when viewed from above; unicolorous shiny reddish-brown. Dorsal Surface. Head elongate, cylindrical, longer than wide by ratio of 1.4:1.0; rounded, posteriorly with scattered short setae, densely punctured, punctures round with fine lines connecting adjacent punctures and forming a flower-like hexagonal pattern (Fig. 3); tempora $2\times$ eye length; eyes lateral, at posterior one-third, reduced to four facets; antennae 11 segmented with 3 segmented club, segment 3 small, rounded, segments 4 & 5 club-shaped, segments 5–7 oval, wider than long; club segments wider than long, narrowly articulated to preceding segments (Fig. 4); clypeus wider than labrum, laterally notched to receive expanded lateral portions of labrum (Fig. 3). Pronotum elongate, cylindrical, longer than wide by ratio of 1.1:1.0, punctures as on head; lateral margins evenly rounded, widest at middle; disk and lateral margins with scattered short setae; anterior and posterior margins with heavier, longer, semi-erect setae. Elytra length $5.6\times$ longer than pronotal length; eight striae; punctures round, first stria with 23 disk punctures; interstria 3 raised, rounded; interstria 7 raised rounded in median three-fourths; long erect setae peripheral to punctures and along margins of interstriae 3, 7 and lateral margins. Ventral surface. Mentum trapezoidal, with scattered round punctures and short setae. Prementum with transverse, narrow, depressed channel behind mentum extending to lateral margins. Area behind premental depression and lateral margins of head (prementum, gula and gena) punctured as on dorsal surface. Prosternum punctured similarly; coxae round, narrowly separated; intercoxal piece absent between coxae, slightly raised posterior to coxae. Mesosternum punctured as prosternum; intercoxal piece narrow, distinct, raised to middle of coxae. Metasternum and first abdominal sternite punctured as prosternum.

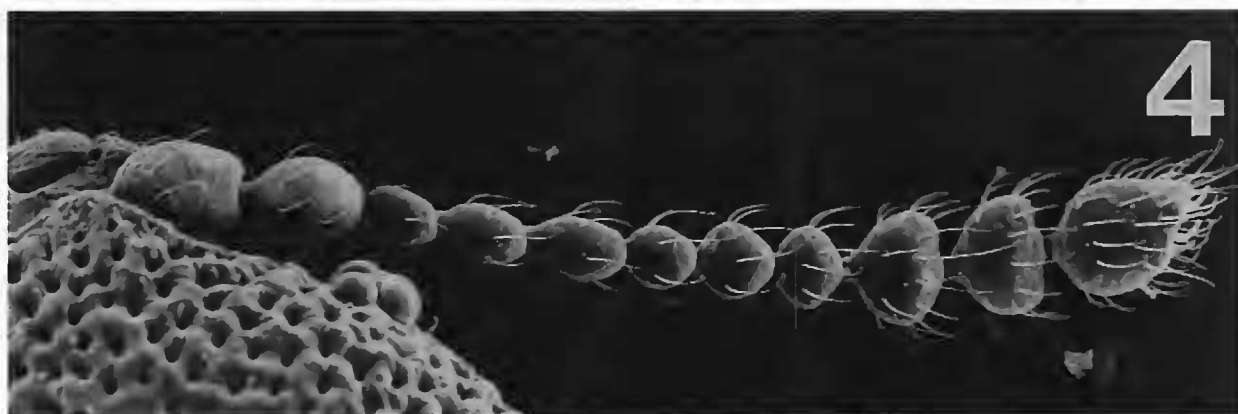


Figures 1–2. *Adistemia okeefei*. Figure 1. Dorsal habitus. Figure 2. Ventral habitus.

Types.—Holotype: COSTA RICA. *GUANACASTE*.: 13.5 km SW of Bagaces, 4 Jul 1996, S. O’Keefe, Berlese; deposited in the California Academy of Sciences. Paratypes (13): same data as holotype (4, one on SEM stub); 4.5 km W of Bagaces, 16 Jul 1996, S. O’Keefe, Berlese (2); 4 Jul 1996, (2); 4.5 km W of Bagaces, Rio Potrero, riparian forest, 21 Jul 1996, site 2, Berlese, S. O’Keefe col. (5); deposited in the collection of the California Department of Agriculture and the Shawn O’Keefe collection.

Diagnosis.—Rounded lateral pronotal margins as opposed to sharply margined lateral pronotal margins separate *A. okeefei* from all other *Adistemia* species.

Discussion.—*Adistemia okeefei* shares characters with the genus *Adistemia* and *Dicastris*. Both of these genera are basically of Chilean origin. *Adistemia okeefei* and *Dicastris* have cylindrical pronotums, while the *Adistemia* pronotum in all other species is dorsoventrally flattened, and the lateral margins are expanded in the anterior one-half. *Adistemia okeefei* differs from *Dicastris* in the form of the antennal segments (loosely articulated as opposed to compactly articulated), shape of punctures (round as opposed to slit-like), nature of the pro- and mesocoxal interpiece and separation (narrowly separated with interpiece not raised above coxae), shape of the trochanters (cylindrical as opposed to disc-like) and lack of mesosternal fovea. This new species will key to couplet 6 in Dajoz’s (1974) key, which includes *A. rileyi* and *A. jeanneli*. *Adistemia okeefei* is easily separable from either of these species by the relative length of the pronotum compared to the elytra. The *A. okeefei* elytra is more than 5 times the length of its pronotum



Figures 3–5. *Adistemia okeefei*. Figure 3. Clypeus and labrum. Figure 4. Antenna. Figure 5. Pronotal sculpture pattern.

while the ratio in *A. rileyi* is 4.2, and in *A. jeanneli* it is 3.4. The single character that will differentiate *A. okeefeï* from all described *Adistemia* is the form of the pronotum. In *A. okeefeï* the pronotum is barrel-shaped, with the lateral margins evenly rounded and widest at the middle; the overall shape is cylindrical. In all other species the pronotum is somewhat dorsoventrally flattened; the lateral margins have a gutter and/or are widest in the anterior one-half. The amount of Berlese work carried out in the neotropical region is meager, and many Lathridiidae species are yet to be discovered. It is likely that additional species of *Adistemia* will be discovered in the area between this Costa Rican species and the many Chilean species.

Etymology—Named for Shawn O'Keefe, who has collected all known specimens.

LITERATURE CITED

- Dajoz, R. 1962. Notes sur les Lathridiidae. Description d'espèces nouvelles ou peu connues et localités nouvelles pour la faune d'Amérique du sud. *Biologie de L'Amérique Australe*. 1: 287–293.
- Dajoz, R. 1974. Révision des *Adistemia* et *Aridius* (COL. Lathridiidae) D'Amérique du Sud. *Ann. Soc. Entomol. France.*, 10: 675–687.
- Hinton, H. E. 1941. The Lathridiidae of economic importance. *Bull. Entomol. Res.*, 32: 191–247.
- Wollaston, T. V. 1871. On additions to the Atlantic Coleoptera. *Trans. Entomol. Soc. London.*, 1871(2): 203–314.

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